



Part 4 – Results

US Army Installation Sustainability Training

Aug 04



Design Parameters for the Sustainable Installation of Tomorrow...

- **Optimizes military training/mission**
- **Provides for the well-being of soldiers and families**
- **Has a mutually-beneficial relationship with the local community**
- **Is life-cycle cost-effective to operate**
- **Sustains community/regional natural resources**



The United States Army – The Journey Begun

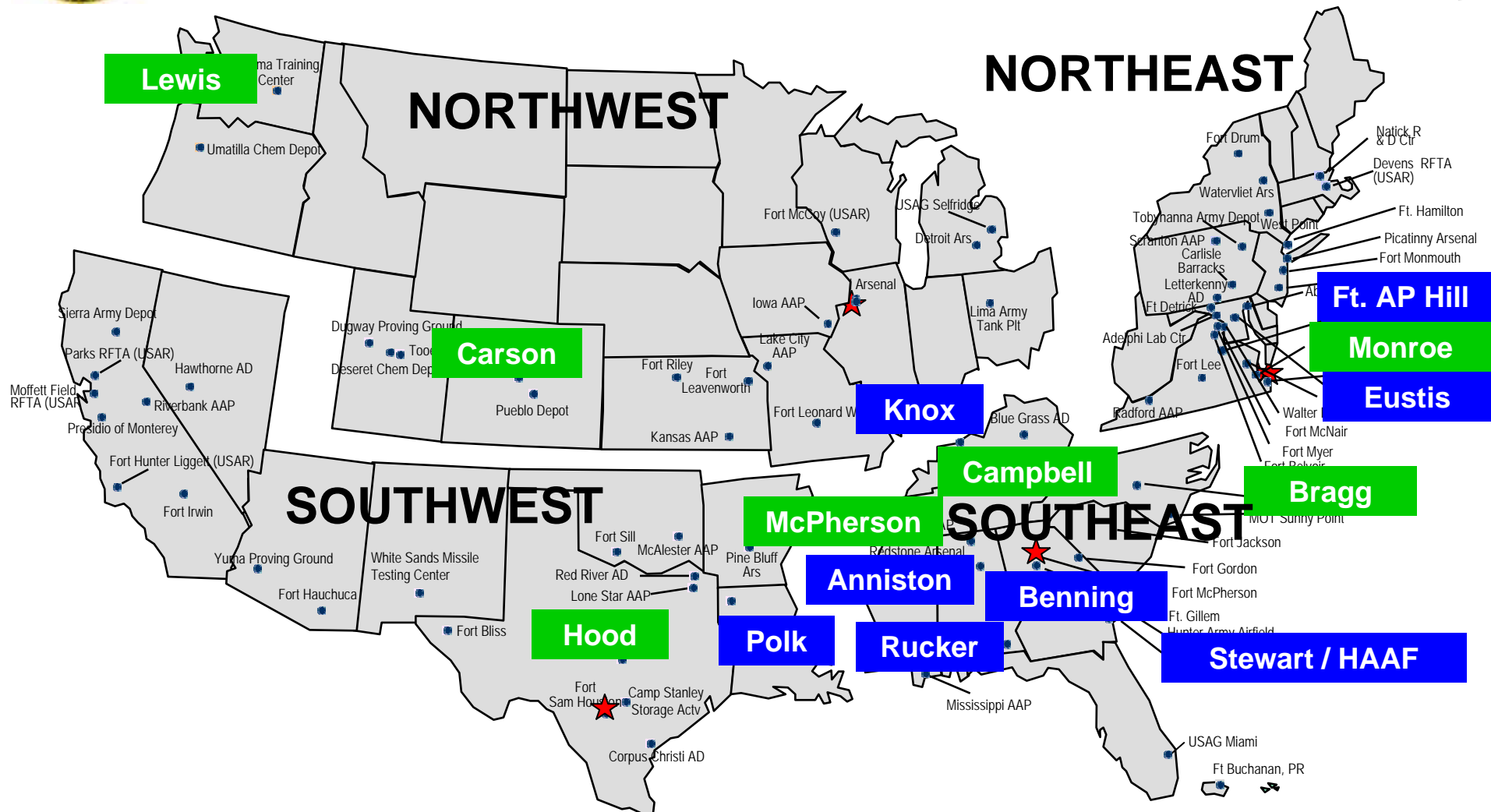


- **Ranges**
 - Sustainable Range Design R&D Program
- **Weapons Systems**
 - Green ammunition R&D program
 - Sustainable weapon system design charrette
- **Facilities**
 - Sustainable Design and Development Policy
 - SPiRiT standards
- **Installations**
 - Army Compatible Use Buffers
 - Installation Sustainability Planning



Installation Sustainability Status

SERO



Underway

Initiating

Completed 25-year goal-setting conference with communities

Planning 25-year goal-setting conference with communities



**Preserving the Legacy...
Building the Future.**



Ft. Campbell
101st Airborne



Ft. Lewis, WA





Installation Sustainability Goals - Include all core business processes

- **Facilities** – meet platinum SPiRiT standards
 - Energy – renewable, secure energy
 - Water – reduce use, improve quality
 - **Strategic and Functional Planning** – joint regional planning, planned development/growth, compatible land use, regional education
 - **Procurement** – completely cyclable non-toxic materials, no waste, local sources
 - **Military Training/Land Management** – optimize use of existing training lands, create easements/buffers around fencelines
 - **Transportation** – convenient (reduced congestion), reliable, clean (emission-free), renewable fuels
- DPW lead
- Plans lead
- DOC/DOL lead
- DPTM lead
- DOL lead



Facility Goals – build to SPiRiT Standards

- Bragg – built “gold” facility for Golden Knights at no additional cost
- Bragg - integrated SPiRiT Standards throughout the Installation Design Guide
- Hood – agriboard buildings are cheaper, better, faster!
- Carson – built “silver” training facility
- Lewis – sustainable design of whole barracks renewal program - \$50M project – 3rd phase going for the gold!



“Golden” facility at Fort Bragg



Agriboard warehouse at Fort Hood



Facility Goals - renewable, secure energy

- Bragg - solar/wind powered lighting at remote access control points
- Bragg - Working energy efficient family housing designs with RCI partner
- Lewis – photovoltaic pilot project
- Lewis – National Renewable Energy Lab study on renewable energy resources (biomass)





Water goals – reduce use, improve quality

- Bragg, Hood, Lewis – using pervious pavement for better storm water management
- Hood – tanker purge facility saves over a million gallons of water
- Bragg – 30% reduction in potable water use 2002; Carson – 10% reduction in water use 2002



**Fort Lewis
permeable
sidewalk and
paving stones**

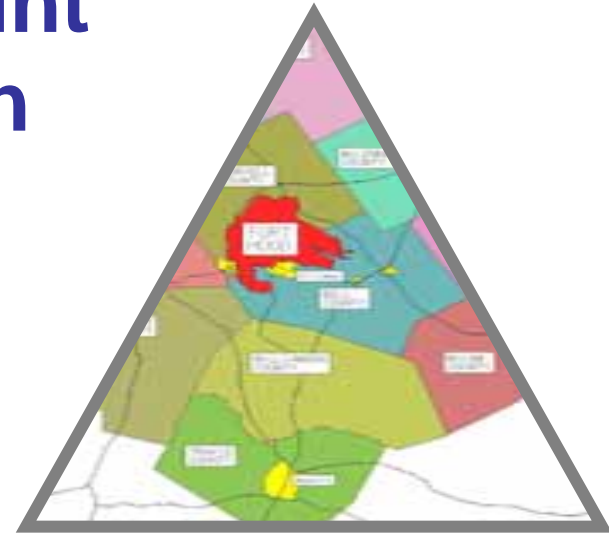


**Fort Hood
tanker
purging
facility**

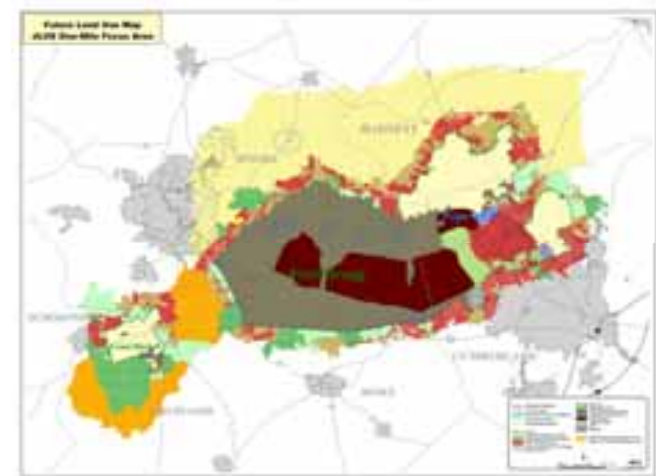


Regional goals – joint planning, outreach

- **Regional sustainability**
 - Bragg - Sustainable Sandhills
 - Lewis – Washington Military Sustainability Partnership
 - Hood – Sustainability Summit
- **Bragg - Development of a 6-county and Fort Bragg GIS to support regional land-use planning**



Ft. Hood – central Texas – one Community



Fort Bragg/Pope Air Force Base Proposed Future Land Use Map



Procurement goals – cyclable materials, no waste



- Campbell – evaluating complete reuse of household garbage and building deconstruction
- Bragg – 59% landfill diversion and grinding all concrete rubble for road pack
- Lewis – using recyclable carpet tiles, plastic wood; 40% landfill diversion FY04
- Carson – increased recycling 25% and decreased HW by 31%

Processed
household garbage
– soil amendments,
plastic lumber



Plastic lumber use at Ft. Lewis



Deconstruction at Ft. Campbell



Transportation goals – clean and convenient

- Bragg – on-post shuttle bus connecting with city bus system
- Bragg – converted all 150 non-tactical vehicles to alt fuels
- Bragg – using biodiesel in all range control diesel vehicles
- Lewis – CNG, E85, and biodiesel fueling stations coming on-line
- Army – hybrid tacticals coming soon!



Hybrid LAV
Oct 2002



MG Collins, DCG Ft Lewis fills
GSA vehicle with CNG fuel

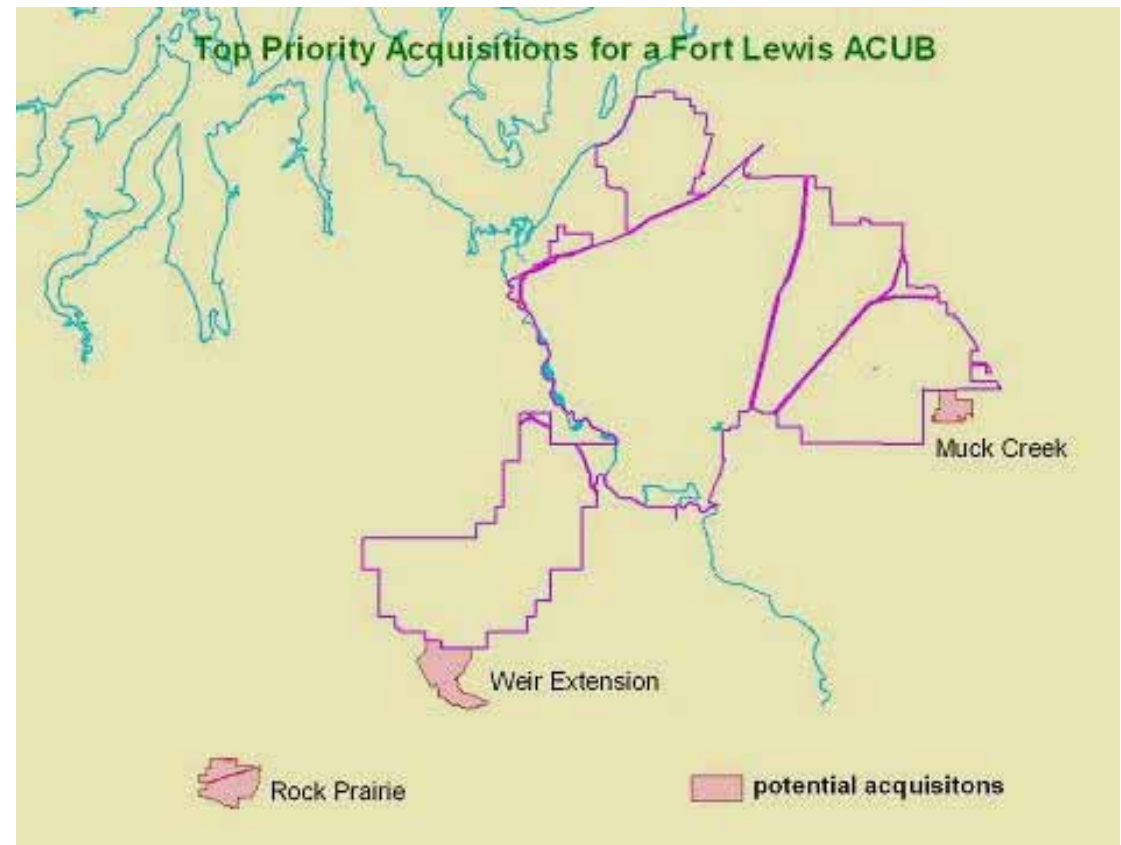


On-post shuttle bus Ft. Bragg



Military training goals – better land use on and off post

- **Lewis – ACUB to provide habitat for TES not yet listed**
- **Carson – working with community planners to build a recycling center vs homes outside the fenceline**
- **Bragg – updated JLUS**





Fort Bragg Sustainability Accomplishments – since 2001



- Reduced potable water usage by 30%
- Converted all concrete demolition rubble into road aggregate for training land restoration
- Increased solid waste diversion rate to 59%.
- Established a neighborhood recycling program
- Construction of a 36,000+ sq foot "gold" facility for the Golden Knights Parachute Team,
- Revised Installation Design Guide to incorporate SPiRiT, the Army's green building standards.
- Completed a Joint Land Use Study
- Created a seven-county GIS database used by all counties to make integrated land-use decisions.
- installed solar and wind-powered exterior lights which are completely off the grid
- Converted all 150 non-tactical vehicles to alternative fuels
- Using biodiesel in all Range Control diesel vehicles.
- implemented an on-post shuttle bus service that connects with the city bus system
- Incorporated both pedestrian and bicycle paths into all construction projects.
- Identifying local sources of procurement for commonly used items
- Established Sustainable Sandhills regional partnership with 6 surrounding counties



The list goes on and on - **INCREDIBLE** progress in 3 short years, all without huge investments of \$\$s, by people pulling together across staff elements towards common goals.



Sustainable Installations



FOR THE SOLDIER